Protocol Title: Pilot study to assess prolonged nightly fasting in breast cancer survivors

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Patient Consent

INTRODUCTION AND KEY INFORMATION

All research is voluntary. It is your choice whether you take part in this research or not. If you decide to participate, please sign and date at the end of this form. We will give you a copy and you can refer to this consent form at any time.

The following is a short summary of this research study to help you decide whether you would like to be a part of this study. More detailed information is provided later in this form.

For purposes of this research, you will be referred to as a "participant."

1. Why am I being invited to take part in a research study?

You are invited to take part in in this research study, because you have breast cancer.

2. Why is this research being done?

This study is being done to examine whether fasting for 13 hours every night is feasible and if it can help breast cancer survivors lose weight and improve their health. Previous studies have found that women who are overweight or obese when their breast cancer is found (diagnosed) have a greater risk of their breast cancer recurring. Recent research suggests that prolonged nighttime fasting

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(>13 hours) may improve the risk of recurrence for breast cancer. This study will examine if fasting for 13 hours per night is doable for participants and will also study what the effect of fasting is on quality of life, mood, fatigue, body size, and markers of health in the blood.

3. Who is supporting this research?

Philanthropy is supporting this research study by providing funding for the research.

4. What does this research study involve and how long will it last?

This research study involves fasting (not eating any food or drinking fluids that contain calories) for 13 hours nightly for 12 weeks. Forty-one people with a history of breast cancer who have completed active cancer therapy will be enrolled. All participants will receive the intervention. Eligible participants will undergo baseline assessments prior to starting the intervention. Baseline assessments include measurements of weight, height, quality of life, fatigue, mood, levels of physical activity, and blood markers. Participants will fast for 13 hours nightly for 12 weeks. Assessments will be repeated at the completion of the 12-week intervention.

You will fast for 13 hours nightly and will be followed for 12 weeks.

It is expected that about 41 people will take part in this research study.

Information about you and your health is personal and private. Generally, it cannot be obtained without your written permission. By signing this form, you are providing that permission and your information may be obtained and used in accordance with this informed consent and as required or allowed by law. This means that researchers may obtain information regarding your past medical history, as well as specimens and samples from previous health care providers such as hospitals and labs.

5. What are the risks to participating in this study?

There are risks to taking part in any research study. However, this particular study is of limited physical risk. We want to make sure you know about a few key risks right now.

Major known risks to participating in this research study include:

- Disclosure of sensitive personal information may result is a loss of privacy
- Possible emotional distress due to personal questions
- Significant amount of time required to complete questionnaires (online and/or in person)
- Significant amount of time required to attend study visits

6. Will being in this study benefit me in any way?

We do not know if taking part in this study will benefit you. This study may help researchers learn information that could help people in the future.

7. What are my options?

Instead of being in this research study, you have other options which may include the following:

- Decide not to participate in this research study
- Participate in another research study

If you choose not to participate, are not eligible to participate, or withdraw from this research study, this will not affect your present or future care and will not cause any penalty or loss of benefits to which you are otherwise entitled.

We encourage you to take some time to think this over, to discuss it with other people and your primary doctor, and to ask questions at any time.

A. WHY IS THIS RESEARCH STUDY BEING DONE?

This research study is a Feasibility Study, which means this is the first time that the investigators are examining prolonged nightly fasting.

In this research study, we are:

- Examining if it is feasible for people to fast for 13 hours overnight, every night for 12 weeks
- Evaluating the effect of overnight fasting on body size and blood markers of health
- Examining the effects of nightly fasting on quality of life, mood, fatigue, and level of physical activity

B. WHAT IS INVOLVED IN THE RESEARCH STUDY?

Before the research starts: Prior to signing this consent form, our research team reviewed your medical record to determine that you were eligible to participate in this research study. We also asked your oncology team for permission to approach you to participate in this study.

After you sign this consent form: You will first be asked to answer a few questions about yourself such as your race, ethnicity, relationship status, education, income, and living situation.

You will then be asked to complete a questionnaire which contains questions about your quality of life (including your general, physical, social, and emotional well-being), mood, fatigue, and level of physical activity. We will also record your weight and height and perform blood tests.

We will then ask you to complete additional questionnaires about your quality of life, mood, fatigue, and physical activity after 6 weeks. You will have the option of completing these questionnaires at the hospital, during one of your routine clinical visits, or remotely through a secure web link.

At the end of the 12 weeks, when you have completed the fasting intervention, we will ask you to repeat the study assessments performed at baseline. This will include the questionnaires about your quality of life (including your general,

physical, social, and emotional well-being), mood, fatigue, and level of physical activity. We will again record your weight and height and perform blood tests.

Completing the questionnaire should take you about 15 to 20 minutes each time. You can choose not to answer any items on the questionnaire at any point in time. You can also choose to complete the questionnaire on a different day. If you have not completed the questionnaire on a given day, you will be reminded to fill it out by the research assistant on two consecutive days.

Study Treatment Overview:

If you take part in this research study, you will be given a fasting log. You will be asked to document the time you first and last eat or drink fluids that contain calories each day. The research team will send an email reminder every two weeks about the fasting log to ensure completion and to provide guidance if any questions or concerns arise throughout the study duration. You will be asked to turn in the log either by mail or electronically after 6 weeks and at study completion.

Research Study Plan:

Study assessments are to be done within one week of the scheduled timepoints.

	Baseline	Week 7	End of Study Visit[6]
Informed consent	X		
Demographics	X		
Medical history	X		
Height	X		X
Weight	X		X
Pregnancy Test[1]	X		
FACT-G[2]	X	X	X
FACIT-Fatigue[3]	X	X	X
HADS[4]	X	X	X
Godin Leisure-Time Exercise Questionnaire	X	X	X
Blood Biomarkers[5]	X		X
Fasting log		X	X

1 Pregnancy Test: Women of child-bearing potential within 7 days of enrollment
2 Functional Assessment of Cancer Therapy – General
3 Functional Assessment of Chronic Illness Therapy – Fatigue
4 Hospital Anxiety and Depression Scale

5 Blood biomarkers - expanded lipid profile, hemoglobin A1c, c-reactive protein, interleukin-6, tumor necrosis factor alpha, insulin, leptin, adiponectin, insulin-like growth factor, and homeostatic model assessment of insulin resistance
6 End of Study Visit to occur within one week of completing the 12-week intervention

C. WHAT ARE THE RISKS OR DISCOMFORTS OF THE RESEARCH STUDY?

There are risks to taking part in any research study.

In a research study, all of the risks or side effects may not be known before you start the study. **You need to tell your doctor or a member of the study team immediately if you experience any side effects.**

During the research study, you will be notified of newly discovered side effects or significant findings, which may affect your health or willingness to participate. You may be asked to sign a new consent form that shows that you have been informed of new information relating to this research study.

Prolonged Nightly Fasting:
There is little anticipated risk from prolonged nightly fasting. However, one potential risk is low blood sugar which may present as lightheadedness, shakiness, or sweatiness. If you do experience these symptoms during fasting, we ask that you eat food and/or drink a calorie-containing beverage and sit down until the symptoms pass. Please let the study team know if you are experiencing these symptoms during the nightly fasting period.

Blood Draw:
There is a small risk of bleeding, bruising, infection, irritation or inflammation of a vein, blood clot or discomfort at the site of the blood collection. Attention will be taken to apply pressure following the procedure to reduce bleeding. Participants may feel dizzy or faint when blood is being withdrawn. We will ask that they lie down for a few minutes until any dizziness passes.

Non-Physical Risks:
Because of side effects or the time required for tests and clinic visits while you are on this research study, you may be unable to keep up with your normal daily activities.

The questionnaires used in this study may be upsetting. If you find the questionnaires upsetting, you may speak with the research doctor or ask to be referred for additional emotional support.

Reproductive Risks:
Prolonged nightly fasting may affect a fetus.
While participating in this research study, you should not:

- become pregnant

We can provide counseling about preventing pregnancy for either male or female study participants. Let your doctor know immediately if you become pregnant.

D. WHAT WILL HAPPEN IF I AM REMOVED FROM THE STUDY OR DECIDE TO END MY PARTICIPATION IN THE RESEARCH?

You may be taken off the research study for any reason including:

- It is considered to be in your best interest
- The study treatment or procedures are found to be unsafe or ineffective
- There is any problem with following study procedures
- You are a female and become pregnant or plan to become pregnant
- Your condition worsens
- A decision is made to end the study
- Or for other unforeseen reasons that make it necessary to stop your participation in the research study

You can also choose to stop participating in the research study at any time. Tell the research doctor if you are thinking about stopping or decide to stop. He or she will tell you how to stop. Leaving the research study will not affect your medical care outside of the research study.

If you agree to allow your data to be kept for future research with identifying information that could link your sample to you, you may withdraw your permission at any time. We ask that you contact your study doctor and let them know you are withdrawing your permission for your identifiable data to be used for future research.

E. WHAT ARE THE BENEFITS OF THIS RESEARCH STUDY?

Taking part in this research study may or may not benefit you. We hope the information learned from this research study will provide more information about whether prolonged nightly fasting is feasible for breast cancer survivors and if it improves body size and blood markers of health.

F. WILL I BE PAID TO TAKE PART IN THIS RESEARCH STUDY?

You will not be paid for participating in this study.

G. WHAT ARE YOUR COSTS?

Taking part in this research study may lead to added costs to you or your insurance company. This may mean that you need to make more visits to the clinic or hospital than if you were getting the usual approach to treat your disease. You may:

- Have more travel costs
- Need to take more time off work
- Have other additional personal costs

You or your insurance company will be charged for portions of your care during this research study that are considered standard care. Standard of care is the care that you would receive regardless of whether you were enrolled in the study or not. You may be responsible for co-payments, co-insurance, premiums and deductibles that are typical for your insurance coverage. This includes the cost of tests, procedures, or medicines to manage any side effects, unless you are told that certain tests, done for research only, are supplied at no charge.

If you have questions about your insurance coverage, or the items you might be required to pay for, please call financial services for information. The contact information for financial services are:

- Massachusetts General Hospital: (617) 726-2191

The National Cancer Institute provides an online resource to help people participating in cancer clinical trials understand which services their insurance company is required by law to pay. This can be found at the website below or can be provided by the study team:

www.cancer.gov
or 1-800-4-CANCER (1-800-422-6237)

H. WHAT HAPPENS IF I AM INJURED OR BECOME SICK BECAUSE I TOOK PART IN THIS RESEARCH STUDY?

If you think you have been injured as a result of taking part in this research study, tell the person in charge of this research study as soon as possible. The research doctor's name and phone number are listed in this consent form.

The treating hospital will offer you the care needed to treat injuries directly resulting from taking part in this research. These treatments may be billed to you or your insurance company. You will be responsible for deductibles, co-payments and co-insurance. There are no plans to pay you or give you other compensation for the injury.

You do not give up your legal rights by signing this form.

We will need to collect certain personal information about you for insurance or payment reporting purposes, such as your name, date of birth, gender, social security number or Medicare identification number and information related to this research study. We may be required to report this information to the Centers for Medicare & Medicaid Services. We will not use this information for any other purpose.

If you go to the Emergency Room or to another hospital or doctor it is important that you tell them that you are in this research. If possible, you should give them a copy of this consent form.

I. WHOM DO I CONTACT IF I HAVE QUESTIONS ABOUT THE RESEARCH STUDY?

If you have questions about the study, please contact the research doctor or study staff as listed below:

Massachusetts General Hospital
- Elizabeth O'Donnell, MD: (617) 724-4000

Massachusetts General Hospital, Waltham
- Jeffrey Peppercorn, MD: (781) 487-6100
- Amy Comander, MD: (781) 487-6100

For questions about your rights as a research participant, please contact a representative of the Office for Human Research Studies at Dana-Farber Cancer Institute (617) 632-3029. This can include questions about your participation in the study, concerns about the study, a research related injury, or if you feel/felt under pressure to enroll in this research study or to continue to participate in this research study.

J. RETURN OF RESEARCH RESULTS

Tests done on samples in this research study, with your identifiable information, will give results that have meaning for your health care. One of your doctors will share the clinically relevant research test results with you. If you do not wish to receive the results from these research tests, please notify your study doctor.

K. CLINICALTRIALS.GOV (CT.GOV)

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. Law. This web site will not include information that can identify you. At most, the web site will include a summary of the results. You can search this web site at any time.

L. FUTURE USE OF DATA AND SPECIMENS

Your personal information collected during this study may be stored and used for future research. Any personal identifiers will be removed so that the information

cannot be linked back to you. As a result, we will no longer be able to identify and destroy them.

Investigators, including investigators from collaborating institutions, can request this data for new research. Data may also be shared with outside non-profit academic investigators as well as with for-profit pharmaceutical investigators or commercial entities, with whom we collaborate.

Your biospecimens collected during this study will not be used or distributed for future research studies even if the information is de-identified and cannot be linked back to you.

M. CONFIDENTIALITY

We will take measures to protect the privacy and security of all your personal information, but we cannot guarantee complete confidentiality of study data.

Medical information created by this research study may become part of your hospital medical record and may be forwarded to your primary doctor. Information that does not become part of your medical record will be stored in your study file. It may also become part of a research database.

The study team plans to publish the results of this research study and when we do, we may be asked to make the data we collect available to other researchers. We will not include information that identifies you in any publications or to the researchers who request the data to do additional research.

N. FINANCIAL DISCLOSURES

It is possible that certain researchers on this study may have earned money from, or own some publicly-traded stock in, the company that makes or is developing the study. The amount of money that a researcher may earn and still take part in research is limited by the Harvard Medical School Faculty of Medicine Policy on Conflicts of Interest and Commitment. If you have further questions, please speak with a member of the study team or contact the Dana-Farber Cancer Institute Office of Research Integrity at 617-432-4557 or researchintegrity@dfci.harvard.edu.

O. PRIVACY OF PROTECTED HEALTH INFORMATION (HIPAA AUTHORIZATION)

The Health Insurance Portability and Accountability Act (HIPAA) is a federal law that requires Dana-Farber/Harvard Cancer Center (DF/HCC) and its affiliated research doctors, health care providers, and physician network to protect the privacy of information that identifies you and relates to your past, present, and future physical and mental health conditions ("protected health information"). If you enroll in this research study, your "protected health information" will be used and shared with others as explained below.

1. What protected health information about me will be used or shared with others during this research?

- Existing medical records, including mental health records.
- New health information created from study-related tests, procedures, visits, and/or questionnaires

2. Why will protected information about me be used or shared with others?

The main reasons include the following:

- To conduct and oversee the research described earlier in this form;
- To ensure the research meets legal, institutional, and accreditation requirements;
- To conduct public health activities (including reporting of adverse events or situations where you or others may be at risk of harm); and
- To provide the study sponsor with information arising from an adverse event or other event that relates to the safety or toxicity of the drug(s) used in the study and for the purpose of this or other research relating the study drug(s) and their use in cancer;
- To better understand the diseases being studied and to improve the design of future studies; and,
- Other reasons may include for treatment, payment, or health care operations. For example, some medical information produced by this research study may become part of your hospital medical record because

the information may be necessary for your medical care. (You will also be given a notice for use and sharing of protected health information.)

3. Who will use or share protected health information about me?

- DF/HCC and its affiliated research doctors and entities participating in the research will use and share your protected health information. In addition, other DF/HCC offices that deal with research oversight, billing or quality assurance will be able to use and share your protected health information.

4. With whom outside of DF/HCC may my protected health information be shared?

While all reasonable efforts will be made to protect the confidentiality of your protected health information, it may also be shared with the following entities:

- Outside individuals or entities that have a need to access this information to perform functions relating to the conduct of this research such as analysis by outside laboratories on behalf of DF/HCC and its affiliates (for example, data storage companies, insurers, or legal advisors).
- Other research doctors and medical centers participating in this research, if applicable
- Federal and state agencies (for example, the Department of Health and Human Services, the Food and Drug Administration, the National Institutes of Health, and/or the Office for Human Research Protections), or other domestic or foreign government bodies if required by law and/or necessary for oversight purposes. A qualified representative of the FDA and the National Cancer Institute may review your medical records.
- Hospital accrediting agencies
- A data safety monitoring board organized to oversee this research, if applicable

Some who may receive your protected health information may not have to satisfy the privacy rules and requirements. They, in fact, may share your information with others without your permission.

5. For how long will protected health information about me be used or shared with others?

- There is no scheduled date at which your protected health information that is being used or shared for this research will be destroyed, because research is an ongoing process.

6. Statement of privacy rights:

- You have the right to withdraw your permission for the research doctors and participating DF/HCC entities to use or share your protected health information. We will not be able to withdraw all the information that already has been used or shared with others to carry out related activities such as oversight, or that is needed to ensure quality of the study. To withdraw your permission, you must do so in writing by contacting the researcher listed above in the section: “Whom do I contact if I have questions about the research study?”
- You have the right to request access to your protected health information that is used or shared during this research and that is related to your treatment or payment for your treatment, but you may access this information only after the study is completed. To request this information, please contact the researcher listed above in the section: “Whom do I contact if I have questions about the research study?”

P. DOCUMENTATION OF CONSENT

My signature below indicates:

- I have had enough time to read the consent and think about participating in this study;
- I have had all of my questions answered to my satisfaction;
- I am willing to participate in this study;
- I have been told that my participation is voluntary and I can withdraw at any time

Signature of Participant or Legally Authorized Representative

Date

Relationship of Legally Authorized Representative to Participant

To be completed by person obtaining consent:

Adult Participant

The consent discussion was initiated on _____ (date).

Signature of individual obtaining consent: _____

Printed name of above: _____

Date: _____

☐ A copy of this signed consent form will be given to the participant or legally authorized representative.

☐ 1) The participant is an adult and provided consent to participate.

☐ 1a) Participant (or legally authorized representative) is a non-English speaker and signed the translated Short Form in lieu of English consent document:

☐ *As someone who understands both English and the language used by the participant, I interpreted and/or witnessed, in the participant's language, the researcher's presentation of the English consent form. The participant was given the opportunity to ask questions.*

Signature of Interpreter/Witness: _____

Printed Name of Interpreter/Witness: _____

Date: _____

☐ 1b) Participant is physically unable to sign the consent form because:

☐ The participant is illiterate.

☐ The participant has a physical disability.

☐ Other (please describe): _____

The consent form was presented to the participant who was given the opportunity to ask questions and who communicated agreement to participate in the research.

Signature of Witness: _____

Printed Name of Witness: _____

Date: _____

☐ 2) The participant is an adult who lacks capacity to provide consent and his/her legally authorized representative:

- ☐ 2a) gave permission for the adult participant to participate
- ☐ 2b) did not give permission for the adult participant to participate